WEST Search History

updated 8/03/03

DATE: Thursday, August 28, 2003

Set Name side by side	Query	Hit Count	Set Name result set
	DB=USPT; PLUR=YES; OP=AND		
L1	passive$.clm. or immunotherap$.clm. or immuno-therap$.clm. or immunopassiv$.clm. or immuno-pass$.clm. or ivig.clm. or igiv.clm. or iggiv.clm. or ivigg.clm. or iv-igg.clm.	10890	L1
L2	antiintimin.clm. or anti-intimin.clm. or antiinvasin.clm. or antiipa.clm. or anti-ipa.clm.	0	L2
L3	intimin.clm.	3	L3
L4	L1 and coli.clm.	16	L4
L5	intimin$.ti,ab,clm.	4	L5
L6	L5 not l3	1	L6
L7	intimin same (antibody or antibodies or immune or immunoglobulin or globulin or immunotherapy or passiveimmunity or passively)	7	L7
L8	L7 not l3 not l5	3	L8

END OF SEARCH HISTORY

WEST Search History

DATE: Thursday, August 28, 2003

Set Name side by side	Query	Hit Count	Set Name result set
	DB=USPT,PGPB,JPAB,EPAB,DWPI,TDBD; PLUR=YES; OP=AND		
L1	eaea or (94 near2 kda) or intimin or intiminlike or invasin	550	L1
L2	L1 and (passive near3 (immunity or immunotherapy or transfer or colostrum or milk))	17	L2

END OF SEARCH HISTORY

07928005 93388838 PMID: 8376575

Intimin **and the intimate attachment of bacteria to human cells.**

Schoolnik G K

Journal of clinical investigation (UNITED STATES) Sep 1993, 92 (3) p1117-8, ISSN 0021-9738 Journal Code: 7802877

Comment on J Clin Invest. 1993 Sep;92(3) 1412-7; Comment on PMID 8376594; Comment on J Clin Invest. 1993 Sep;92(3):1418-1424

Document type: Comment; Editorial

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

Subfile: AIM; INDEX MEDICUS

Tags: Human

Descriptors: *Bacterial Adhesion; *Bacterial Outer Membrane Proteins --metabolism--ME; *Escherichia coli--pathogenicity--PY; Amino Acid Sequence ; Bacterial Proteins--metabolism--ME; Molecular Sequence Data; Oligopeptides

CAS Registry No.: 0 (Bacterial Outer Membrane Proteins); 0 (Bacterial Proteins); 0 (Oligopeptides); 114073-91-5 (invasin); 99896-85-2 (arginyl-glycyl-aspartic acid)

Record Date Created: 19931015

Record Date Completed: 19931015

YadA invasin

immunoprophylaxis

07367354 92230521 PMID: 1809012 Record Identifier: 073665; 00213071

Milk **secretory IgA related to** Shigella **virulence antigens.**

Cleary T G; Hyani K; Winsor D K; Ruiz-Palacios G

Department of Pediatrics, University of Texas Medical School, Houston.

Advances in experimental medicine and biology (UNITED STATES) 1991, 310 p369-73, ISSN 0065-2598 Journal Code: 0121103

TJ: ADVANCES IN EXPERIMENTAL MEDICINE AND BIOLOGY.

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Other Citation Owner: PIP; POP

Abstract Source: PIP

Record type: Completed

Subfile: INDEX MEDICUS

20 Mexico City and 23 Houston, Texas colostrum samples, and 21 Mexican and 25 Houston mature **milk** samples were analyzed by ELISA and Western blot, respectively, for antibodies against the virulence plasmid of **Shigella** flexneri serotype 5 strain M90T. The method involved comparing water extracts of **milk** in ELISA and Western blot determinations of antigens against **shigella** flexneri strain M90T which is fully virulent, to those against M90T A2 which lacks the virulence plasmid. While there are at least 37 know distinct lipopolysaccharide antigens on different strains of the 4 species of **Shigella** , all contain the same plasmid conferring virulence, the ability of the bacteria to invade mammalian cells. This provided a universal test for antigens to **Shigella** . Western blots showed antibodies in all 21 Mexican women and in 40% of 25 Houston women. Plasmid antibodies were detected by ELISA in all 20 Mexican colostrum samples and in 52% of 23 Houston colostrum samples. After 8 days of lactation, 93% of the Mexican and 46% of the Houston **milk** samples were positive. The actual protective factor in human **milk** against **Shigella** bacteria is unknown: these findings suggest a mechanism for protection against all serotypes of **shigella** . The high prevalence of antibodies against **Shigella** found in Houston women was attributed to infection in the distant past.

Tags: Comparative Study; Female; Human

05749580 88103003 PMID: 3321942

Inhibition of enteropathogenic Escherichia coli **(strain RDEC-1) adherence to rabbit intestinal** brush borders **by** milk **immune secretory** immunoglobulin **A.**

Boedeker E C; Cheney C P; Cantey J R

Department of Gastroenterology, Walter Reed Army Institute of Research, Washington, D.C.

Advances in experimental medicine and biology (UNITED STATES) 1987, 216B p919-30, ISSN 0065-2598 Journal Code: 0121103

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

Subfile: INDEX MEDICUS

Tags: Animal; Female; Pregnancy

Descriptors: Bacterial Adhesion; * **Immunoglobulin** A, Secretory --immunology--IM; *Intestinal Mucosa--microbiology--MI; * **Milk** --immunology --IM; **Escherichia coli** --immunology--IM; **Escherichia coli** --isolation and purification--IP; **Escherichia coli** Infections --prevention and control--PC; Intestinal Mucosa--immunology--IM; Microvilli --immunology--IM; Microvilli--microbiology--MI; Rabbits; **Shigella** flexneri--immunology--IM

CAS Registry No.: 0 (Immunoglobulin A, Secretory)

Record Date Created: 19880127

Record Date Completed: 19880127

WEST

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Search Results - Record(s) 1 through 3 of 3 returned.

☐ 1. Document ID: US 6406885 B1

L3: Entry 1 of 3 File: USPT Jun 18, 2002

DOCUMENT-IDENTIFIER: US 6406885 B1
**** See image for Certificate of Correction ****
TITLE: Plants and plant cells expressing histidine tagged intimin

CLAIMS:

1. A plant cell expressing intimin, comprising a plant cell transformed with a plant transformation vector comprising heterologous DNA encoding intimin, under the control of a plant promoter, such that the intimin which is expressed from the heterologous DNA retains binding function, and wherein the heterologous DNA further encodes a histidne tag.

2. A method for producing a plant which expresses intimin, comprising:

a) transforming a plant cell with a plant transformation vector comprising heterologous DNA, encoding intimin, under the control of a plant promoter, wherein the intimin retains binding function, and wherein the heterologous DNA, further encodes a histidine tag;

b) regenerating a plant from said transformed plant cell, wherein the regenerated plant expresses the intimin; and

c) utilizing the regenerated plant expressing intimin as a source of intimin.

3. A method of claim 2, further comprising enriching or purifying the intimin from the regenerated plant.

13. A method of claim 3, wherein the enriching or purifying of the intimin comprises using at least one of high performance liquid chromatography (HPLC), gel column chromatography, and SDS-PAGE.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw. Desc | Image

☐ 2. Document ID: US 6291435 B1

L3: Entry 2 of 3 File: USPT Sep 18, 2001

DOCUMENT-IDENTIFIER: US 6291435 B1
TITLE: Treatment of diarrhea caused by enteropathogenic Escherichia coli

CLAIMS:

16. The composition of claim 9, wherein said virulence factors are selected from the group consisting of bundle-forming pili and intimin.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw Desc
Image

☐ 3. Document ID: US 6261561 B1

L3: Entry 3 of 3 File: USPT Jul 17, 2001

DOCUMENT-IDENTIFIER: US 6261561 B1
TITLE: Method of stimulating an immune response by administration of host organisms that express intimin alone or as a fusion protein with one or more other antigens

CLAIMS:

1. A plant cell expressing intimin, comprising a plant cell transformed with a plant transformation vector comprising heterologous DNA encoding intimin under the control of a plant promoter, wherein the intimin which is expressed from the heterologous DNA retains binding function.

2. A method for producing intimin in a plant, comprising the steps of:

a) transforming a plant cell with a plant transformation vector comprising heterologous DNA encoding intimin under the control of a plant promoter, wherein the intimin which is expressed from the heterologous DNA retains binding function;

b) regenerating a plant from said transformed plant cell, wherein the regenerated plant expresses the intimin; and

c) utilizing the regenerated plant expressing intimin as a source of intimin.

3. The method of claim 2, further comprising enriching or purifying the intimin from the regenerated plant.

Generate Collection | Print

Terms	Documents
intimin.clm.	3

Display Format: KWIC | Change Format

Previous Page Next Page

WEST

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L4: Entry 6 of 16 File: USPT Jan 14, 1997

DOCUMENT-IDENTIFIER: US 5593679 A
TITLE: Poultry vaccine against E. coli air sac inflammation and septicaemia

CLAIMS:

1. A method for protecting poultry against E. coli septicaemia and air sac inflammation, comprising administering an effective amount of a vaccine to the poultry, said vaccine comprising an immunologically effective amount of at least one immunogenic component selected from the group consisting of purified E. coli fimbriae of the F11 type and an 18 kD subunit of said fimbriae, and at least one additional antigen selected from the group consisting of infectious bronchitis virus, infection bursal disease virus, Newcastle disease virus and a purified E. coli antigen other than an F11 fimbriae antigen, and a pharmaceutically acceptable carrier or diluent.

5. The method according to claim 1, wherein the immunogenic component is obtained from E. coli strain AM1727, containing plasmid pPIL291-15, deposited with CNCM under accession no. I-709.

6. The method according to claim 1, wherein the additional antigen is purified E. coli flagella antigen.

7. A method for the passive immunization of poultry offspring comprising administering a poultry vaccine to a laying hen in an amount effective for the passive immunization of offspring by inducing production of antibodies against F11 fimbriae in the laying hen, which are transferred to ova and, thereby, to hatched offspring, wherein said vaccine comprises an immunologically effective amount of at least one immunogenic component selected from the group consisting of purified E. coli fimbriae of the F11 type and an 18 kD subunit of said fimbriae, and a pharmaceutically acceptable carrier or diluent.

WEST

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L4: Entry 14 of 16 File: USPT Aug 25, 1981

DOCUMENT-IDENTIFIER: US 4285931 A
TITLE: E. coli enterotoxin vaccine for veterinary and human use

CLAIMS:

1. A method of immunizing against E. coli induced diarrhea comprising administering to humans or animals from 25 .mu.g to 1,000 .mu.g of the enterotoxin isolated from E. coli culture filtrate having a molecular weight of 10,000-13,000 when determined by gel filtration or by sucrose density gradient; containing 90% protein, 2% hexose, no 2-keto deoxy octonic acid; being a homogeneous single chain protein with N-terminal alanine when determined by the dansylation method and SDS-acrylamide electrophoresis; and showing no activity in the limulus lysate assay.

2. The use of the enterotoxin of claim 1 to induce passive immunity in offspring of pregnant animals by administering 25 .mu.g to 1000 .mu.g of the enterotoxin to the pregnant animal.

WEST

End of Result Set

☐ Generate Collection Print

L6: Entry 1 of 1 File: USPT May 5, 1998

US-PAT-NO: 5747293
DOCUMENT-IDENTIFIER: US 5747293 A
**** See image for Certificate of Correction ****

TITLE: Intimin-like proteins of E. coli

DATE-ISSUED: May 5, 1998

INT-CL: [06] C07 K 14/245, C07 K 14/00, C07 K 14/24

US-CL-ISSUED: 530/402; 530/350, 530/825
US-CL-CURRENT: 530/402; 530/350, 530/825

FIELD-OF-SEARCH: 530/402, 530/350

10663786 97012536 PMID: 9156577

Cellular responses to enteropathogenic Escherichia coli infection.

Knutton S
Institute of Child Health, University of Birmingham, UK.

Bioscience reports (UNITED STATES) Dec 1995, 15 (6) p469-79, ISSN 0144-8463 Journal Code: 8102797
Document type: Journal Article; Review; Review, Tutorial
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed
Subfile: INDEX MEDICUS

Enteropathogenic Escherichia coli (EPEC), first described in the 1940's and 1950's, remain an important cause of severe infantile diarrhoea in many parts of the developing world. EPEC do not produce enterotoxins and are not invasive; instead their virulence depends upon exploitation of host cell signalling pathways and the host cell cytoskeleton both as a means of colonizing mucosal surfaces of the small intestine and causing diarrhoea. Following initial mucosal attachment, EPEC secrete 'signalling' proteins and express a surface adhesin, **intimin** , to produce 'attaching & effacing' lesions in the enterocyte brush border membrane characterised by localised destruction of brush border microvilli, intimate bacterial adhesion and cytoskeletal reorganisation and accretion beneath attached bacteria. The pathophysiology of EPEC diarrhoea is also complex and probably results from a combination of epithelial cell responses including both electrolyte secretion and structural damage. (49 Refs.)

Tags: Human; Support, Non-U.S. Gov't
Descriptors: *Diarrhea--etiology--ET; *Escherichia coli Infections --etiology--ET; Bacterial Adhesion; Diarrhea--microbiology--MI; Diarrhea --physiopathology--PP; Escherichia coli--pathogenicity--PY; Escherichia coli--physiology--PH; Escherichia coli Infections--microbiology--MI; Escherichia coli Infections--physiopathology--PP; Infant; Intestinal Mucosa--microbiology--MI; Intestinal Mucosa--pathology--PA; Models, Biological; Signal Transduction; Virulence
Record Date Created: 19970522
Record Date Completed: 19970522

08681341 95369946 PMID: 7642319

Enterohemorrhagic Escherichia coli O157:H7 requires intimin **to colonize the gnotobiotic pig intestine and to adhere to HEp-2 cells.**

McKee M L; Melton-Celsa A R; Moxley R A; Francis D H; O'Brien A D

Department of Microbiology and Immunology, Uniformed Services University of the Health Sciences, F. Edward Hebert School of Medicine, Bethesda, Maryland 20814-4799, USA.

Infection and immunity (UNITED STATES) Sep 1995, 63 (9) p3739-44, ISSN 0019-9567 Journal Code: 0246127

Contract/Grant No.: AI21048-12; AI; NIAID

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

Subfile: INDEX MEDICUS

In a previous study, enterohemorrhagic Escherichia coli (EHEC) O157:H7 with a deletion and insertion in the eaeA gene encoding **intimin** was used to establish that **intimin** is required for the organism to attach to and efface microvilli in the piglet intestine (M. S. Donnenberg, S. Tzipori, M. L. McKee, A. D. O'Brien, J. Alroy, and J. B. Kaper, J. Clin. Invest. 92:1418-1424, 1993). However, in the same investigation, a role for **intimin** in EHEC adherence to HEp-2 cells could not be definitively demonstrated. To analyze the basis for this discrepancy, we constructed an in-frame deletion of eaeA and compared the adherence capacity of this mutant with that of the wild-type strain in vitro and in vivo. We observed a direct correlation between the requisite for **intimin** in EHEC O157:H7 colonization of the gnotobiotic piglet intestine and adherence of the bacterium to HEp-2 cells. The in vitro-in vivo correlation lends credence to the use of the HEp-2 cell adherence model for further study of the **intimin** protein.

Tags: Animal; Support, U.S. Gov't, P.H.S.

06104721 89120007 PMID: 3064965

Vaccination of pregnant cows **with K99 antigen of enterotoxigenic** Escherichia coli **and protection by colostrum in** newborn **calves.**

Valente C; Fruganti G; Tesei B; Ciorba A; Cardaras P; Floris A; Bordoni E

Cattedra di Patologia e Profilassi delle Malattie Infettive, Universita di Perugia, Italy.

Comparative immunology, microbiology and infectious diseases (ENGLAND) 1988, 11 (3-4) p189-98, ISSN 0147-9571 Journal Code: 7808924

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

Subfile: INDEX MEDICUS

The immune response to the K99 was tested in 45 pregnant **cows** , subcutaneously vaccinated, for protecting the **newborn** calves. Serological tests were performed in the blood sera of all animals and in the **milk** and colostrum sera; hemogram, inhibition of the adhesion to the **brush border** and histological tests were performed. The calves from vaccinated **cows** survived the experimental infection after the suction of colostrum in spite of the fact that the calves from control dams died with diarrhea.

Tags: Animal; Female; Pregnancy

Descriptors: Antigens, Surface--immunology--IM; *Bacterial Vaccines --administration and dosage--AD; * **Cattle** Diseases--prevention and control --PC; * **Escherichia coli** Infections--veterinary--VE; *Immunity, Maternally-Acquired; Agglutination Tests--veterinary--VE; Aging--immunology --IM; Antibodies, Bacterial--biosynthesis--BI; Antigens, Surface --administration and dosage--AD; Blood Cell Count--veterinary--VE; **Cattle** ; Colostrum--immunology--IM; **Escherichia coli** --immunology--IM; **Escherichia coli** Infections--prevention and control--PC

CAS Registry No.: 0 (Antibodies, Bacterial); 0 (Antigens, Surface); 0 (Bacterial Vaccines); 0 (K99 antigen)

Record Date Created: 19890317

Record Date Completed: 19890317

updated 8/03 VSP

08642882 95331475 PMID: 7607406

Identification of EaeA protein in the outer membrane of attaching and effacing Escherichia coli O45 from pigs.

Zhu C; Harel J; Dumas F; Fairbrother J M

Groupe de Recherche sur les Maladies Infectieuses du Porc, Universite de Montreal Faculte de Medecine Veterinaire, Saint-Hyacinthe, Quebec, Canada.

FEMS microbiology letters (NETHERLANDS) Jun 15 1995, 129 (2-3) p237-42, ISSN 0378-1097 Journal Code: 7705721

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

Subfile: INDEX MEDICUS

We have previously reported that the production of attaching and effacing lesions by Escherichia coli O45 isolates from pigs is associated with the eaeA (E. coli attaching and effacing) gene. In the present study, expression of the EaeA protein, the eaeA gene product, among swine O45 E. coli isolates was examined. The majority (20/22) of attaching and effacing positive, eaeA+ E. coli O45 isolates, but none of ten attaching and effacing negative, eaeA- or eaeA+ isolates, expressed a 97-kDa outer membrane protein as revealed by sodium dodecyl sulfate-polyacrylamide gel electrophoresis (SDS-PAGE) and Western blot analysis. Amino-terminal amino acid sequencing demonstrated a high homology between this 97-kDa protein of swine E. coli O45 and the EaeA protein (**intimin**) of human enteropathogenic E. coli and enterohemorrhagic E. coli. In addition, a serological relationship between the EaeA proteins of swine O45, rabbit (RDEC-1) and human (E2348/69) attaching and effacing E. coli strains was observed. Our results indicate an association between expression of the EaeA protein and attaching and effacing activity among O45 E. coli isolates. The data also suggest an antigenic relatedness of the EaeA proteins of swine, rabbit, and human attaching and effacing E. coli.

Tags: Animal; Support, Non-U.S. Gov't

Descriptors: *Bacterial Outer Membrane Proteins--biosynthesis--BI; *Escherichia coli--physiology--PH; Amino Acid Sequence; Bacterial Outer Membrane Proteins--chemistry--CH; Cell Adhesion; Molecular Sequence Data; Sequence Alignment; Swine--microbiology--MI

CAS Registry No.: 0 (Bacterial Outer Membrane Proteins); 147094-99-3 (eae protein)

Record Date Created: 19950816

Record Date Completed: 19950816

updated 8/03

08681320 95369925 PMID: 7642299

The role of the eaeA gene in diarrhea and neurological complications in a gnotobiotic piglet model of enterohemorrhagic Escherichia coli infection.

Tzipori S; Gunzer F; Donnenberg M S; de Montigny L; Kaper J B; Donohue-Rolfe A

Division of Infectious Diseases, Tufts University School of Veterinary Medicine, North Grafton, Massachusetts 01536, USA.

Infection and immunity (UNITED STATES) Sep 1995, 63 (9) p3621-7, ISSN 0019-9567 Journal Code: 0246127

Contract/Grant No.: 1P30 DK39428; DK; NIDDK; AI-20325; AI; NIAID; AI-32074; AI; NIAID

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

Subfile: INDEX MEDICUS

We reported previously that mutation of the chromosomal gene eaeA from enterohemorrhagic Escherichia coli (EHEC) serotype O157:H7 prevented bacterial attachment in vivo. Attachment was restored when the EHEC or enteropathogenic E. coli (EPEC) eaeA gene was introduced into the mutant on a plasmid. In this communication we have compared in gnotobiotic piglets the pathogenicities of wild-type O157:H7 strain 86-24 and its eaeA mutant UMD619 with those of the two plasmid-complemented strains expressing **Intimin0157** (EHEC) and **Intimin0127** (EPEC). 86-24 colonized the surface and glandular epithelium of the large intestine and induced diarrhea, while UMD619 did not colonize any intestinal site and induced little or no diarrhea. Surprisingly, strain UMD619 expressing **Intimin0127** behaved in pigs more like EPEC than EHEC strains; it colonized the distal half of the small intestine and the surface of the large intestine, inducing serious diarrhea. In contrast, strain UMD619 expressing **Intimin0157** colonized the colon extremely poorly, inducing little or no diarrhea. While only the two strains causing extensive attachment--86-24 and UMD619 expressing **Intimin0127** --induced diarrhea, neurological symptoms attributed to Shiga-like toxin II occurred equally in all four groups of animals. The intimate bacterial attachment and mucosal damage were not a prerequisite for Shiga-like toxin II translocation from the gut lumen into the circulation. **Intimin0127** appears not only to facilitate intimate attachment to cells but also to influence the site of intestinal colonization and other characteristics of EPEC infection.

Tags: Animal; Support, Non-U.S. Gov't; Support, U.S. Gov't, Non-P.H.S.; Support, U.S. Gov't, P.H.S.

Descriptors: *Bacterial Outer Membrane Proteins--genetics--GE; *Diarrhea --etiology--ET; *Escherichia coli--genetics--GE; *Escherichia coli Infections--etiology--ET; *Genes, Bacterial; *Nervous System Diseases --etiology--ET; Bacterial Adhesion; Bacterial Toxins--toxicity--TO; Escherichia coli Infections--pathology--PA; Germ-Free Life; Immunoblotting; Shiga-Like Toxin II; Swine

CAS Registry No.: 0 (Bacterial Outer Membrane Proteins); 0 (Bacterial Toxins); 0 (Shiga-Like Toxin II); 147094-99-3 (eae protein)

Gene Symbol: eaeA

Record Date Created: 19950921

Record Date Completed: 19950921

Anticytotoxin-neutralizing antibodies in immune globulin preparations: potential use in hemolytic-uremic syndrome [see comments]

Ashkenazi S; Cleary TG; Lopez E; Pickering LK
Program in Infectious Diseases and Clinical Microbiology, University of Texas Medical School, Houston 77025.

J Pediatr (UNITED STATES) Dec 1988, 113 (6) p1008-14, ISSN 0022-3476 Journal Code: JLZ
Comment in J Pediatr 1989 Sep;115(3):502-4
Languages: ENGLISH
Document type: JOURNAL ARTICLE
JOURNAL ANNOUNCEMENT: 8903
Subfile: AIM; INDEX MEDICUS

The pathogenesis of primary (classic) hemolytic-uremic syndrome (HUS) is thought to be related to cytotoxin-producing enteric pathogens such as Shigella dysenteriae serotype 1 and Escherichia coli serotypes **0157** :H7 and 026:H11. The relevant cytotoxins include Shiga toxin and the closely related Shiga-like toxins (SLTs) produced by some E. coli strains. Intravenously administered immune globulin (IVIG) therapy has been reported to be beneficial in a few children with HUS. We therefore examined commercially available immune globulin preparations for the presence of anticytotoxin-neutralizing antibodies. Cytotoxicity and neutralization of the HUS-associated cytotoxins were quantitatively determined by means of a (3H)thymidine-labeled HeLa cell assay. The immune globulin preparations tested almost completely neutralized Shiga toxin (produced by S. dysenteriae 1) and SLT-I (produced by E. coli serotype 026:H11). Twofold dilutions of the preparations showed significant (p less than 0.01) neutralizing titers of 1:64 to 1:128. No significant neutralization (greater than 20%) of SLT-II (produced by E. coli strain C600 (933W] was noted. The IVIG preparation lost its inhibitory activity when passed through a protein A-Sepharose column, which bound immune globulin, indicating that its neutralizing effect is related to the antibody content. We also examined sera from 30 children without diarrhea or HUS; only one child had neutralizing titers against Shiga toxin (1:64) and SLT-I (1:128). Immune globulin preparations contain anticytotoxin-neutralizing antibodies, a finding that warrants further investigation of the therapeutic role of these preparations in early treatment of children with HUS related to Shiga toxin and SLT-I.

Anticytotoxin-neutralizing antibodies in immune globulin preparations: potential use in hemolytic-uremic syndrome [see comments]

Ashkenazi S; Cleary TG; Lopez E; Pickering LK

Program in Infectious Diseases and Clinical Microbiology, University of Texas Medical School, Houston 77025.

J Pediatr (UNITED STATES) Dec 1988, 113 (6) p1008-14, ISSN 0022-3476 Journal Code: JLZ

Comment in J Pediatr 1989 Sep;115(3):502-4

Languages: ENGLISH

Document type: JOURNAL ARTICLE

JOURNAL ANNOUNCEMENT: 8903

Subfile: AIM; INDEX MEDICUS

The pathogenesis of primary (classic) hemolytic-uremic syndrome (HUS) is thought to be related to cytotoxin-producing enteric pathogens such as Shigella dysenteriae serotype 1 and Escherichia coli serotypes **0157** :H7 and 026:H11. The relevant cytotoxins include Shiga toxin and the closely related Shiga-like toxins (SLTs) produced by some E. coli strains. **Intravenously administered immune globulin (IVIG) therapy has been reported to be beneficial in a few children with HUS.** We therefore examined commercially available immune globulin preparations for the presence of anticytotoxin-neutralizing antibodies. Cytotoxicity and neutralization of the HUS-associated cytotoxins were quantitatively determined by means of a (3H)thymidine-labeled HeLa cell assay. The immune globulin preparations tested almost completely neutralized Shiga toxin (produced by S. dysenteriae 1) and SLT-I (produced by E. coli serotype 026:H11). Twofold dilutions of the preparations showed significant (p less than 0.01) neutralizing titers of 1:64 to 1:128. No significant neutralization (greater than 20%) of SLT-II (produced by E. coli strain C600 (933W] was noted. The IVIG preparation lost its inhibitory activity when passed through a protein A-Sepharose column, which bound immune globulin, indicating that its neutralizing effect is related to the antibody content. We also examined sera from 30 children without diarrhea or HUS; only one child had neutralizing titers against Shiga toxin (1:64) and SLT-I (1:128). Immune globulin preparations contain anticytotoxin-neutralizing antibodies, a finding that warrants further investigation of the therapeutic role of these preparations in early treatment of children with HUS related to Shiga toxin and SLT-I.